

Hellenbrand

Go Green and Recycle Your Water with a Hellenbrand Water Management System

U.S. Patent No. 9,862,619 and 9,346,689 B2

- Reclaim approximately 65% of the regeneration water from your water softener and use it to flush your toilets and/or urinals.
- The portion of the regeneration water with salt water is automatically diverted to drain.
 - An optional brine reclaim feature would allow the highest concentration of salt/brine water to be re-used on the next regeneration for additional water and salt savings.
- That's water savings on the front end to buy it.
- Less demand on the water utility for pumping and treatment to supply your water.
- Savings on the back end for sewer charges.
- Additional savings on water that would have typically been softened, saving you on salt and less chlorides for the waste water treatment plant to treat.

Additional Reclaim Opportunities

- 100% of the reject water from an R.O. System, resulting in a "zero" waste R.O.
- 100% of the water from your humidification system, such as Aprilaire™.
- 100% of your water from your dehumidification system.
- 100% of the condensate water from your furnace.

Built In Disinfection & Repressurization System

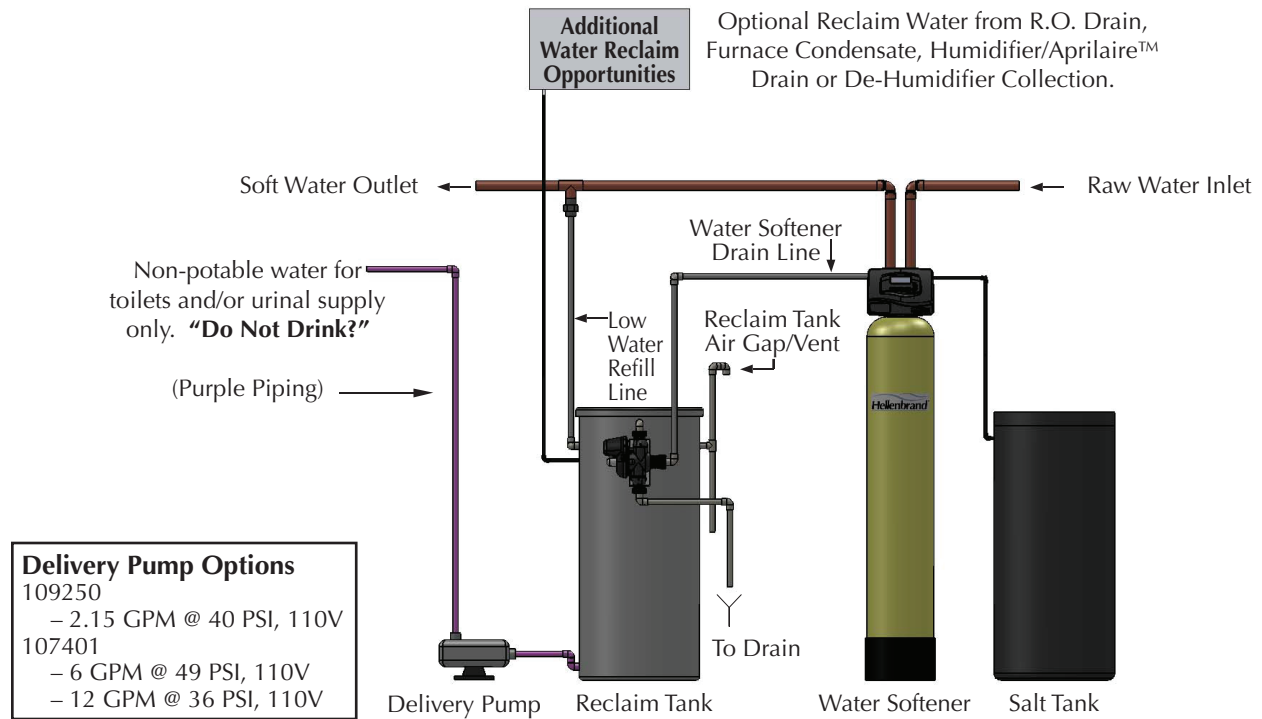
- The holding tank maintains chlorine residual for proper disinfection.
- The repressurization system supplies adequate pressure and volume to "re-use" this water to flush your toilets.
- A built-in water monitor, allows for softened water to be added to the tank when the reclaim volume does not meet flushing needs.

Available On These Systems

- ProMate-6 Series (shown here)
- H125 Series
- H151 & H200M Commercial Systems



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Water Management System Savings for Water, Salt and Chlorides

Calculation of water saved per regeneration: (Backwash Minutes + Slow Rinse Minutes) x (Drain Line Flow Control Size "GPM") + (Slow Rinse Rate @ 40 PSI x 12 Minutes) or approximately 65% of the water typically used to regenerate.

Salt and chloride savings are directly related to water savings

Assumptions:

- Regeneration Frequency is based on every (4) days or 90 Regenerations/Year
- Older 1.0 Cu. Ft. Water Softeners = 28,000 grains @ 10lbs. Salt
- Water Hardness = 20 GPG
- Chloride Discharge Reduction Equals:
 - Annual Gallons Saved x 20 GPG Hardness
 - Example: 1836 Gallons x 20 = 36,720 Grains Saved
 - 36,720 / 28,000 = 1.3 Regenerations/Year
 - 1.3 x 10 Lbs. = 13 Lbs. Salt
 - 13 Lbs. x .606 = 7.88 Chlorides not discharged by reclaiming softener regeneration water

Softener Size	Water Saved per Regeneration	Annual Gallons Saved	Chloride Discharge Reduction
24 k capacity	20.40 Gallons	1836.0	7.88 lbs. Chloride
32 k capacity	23.76 Gallons	2138.4	9.09 lbs. Chloride
48 k capacity	30.48 Gallons	2743.2	11.87 lbs. Chloride

Softener Size	Water Saved with Systems 15+ Years Old	Annual Gallons Saved	Chloride Discharge Reduction
24 k capacity	40.56 Gallons	3650	15.79 lbs. Chloride
32 k capacity	49.70 Gallons	4473	19.36 lbs. Chloride
48 k capacity	60.58 Gallons	5452	23.59 lbs. Chloride

Reclaim Tank Selection	Max Capacity	Max Size Standard Softener
1840 (DxH)	32 Gallons	48 k capacity
2450	75 Gallons	120 k capacity
3050	133 Gallons	180 k capacity - 18" tank

Max capacity is calculated by multiplying tank height - 8" (for safety factor) times gallons per inch of water height.
 18" – 1.1 gallons per inch of water height
 24" – 1.96 gallons per inch of water height
 30" – 3.06 gallons per inch of water height